CONTAINS CONFIDENTIAL BUSINESS INFORMATION NOT SUBJECT TO DISCLOSURE UNDER FOIA

June 7, 2021

By Electronic Mail

Thomas Carroll
Acting Director
Air Enforcement Division
Office of Civil Enforcement
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW
Mail Code: 2201A
Washington, DC 20460

Re: June Update to Response to April 24, 2020 Letter from the U.S. Environmental Protection Agency

Dear Mr. Carroll:

Birla Carbon USA, Inc. ("Birla" or the "Company") submits this letter as the thirteenth update to its May 22, 2020 response to the April 24, 2020 letter it received from the U.S. Environmental Protection Agency ("EPA" or the "Agency") regarding force majeure notices the Company submitted on March 16 and 18, 2020 in anticipated noncompliance with obligations under the Consent Decree between the United States of America, the Louisiana Department of Environmental Quality ("LDEQ"), the Kansas Department of Health and Environment ("KDHE"), and Columbian Chemicals Company. Consent Decree, *United States et al. v. Columbian Chem. Co*., No. 6:17-cv-01661-RGJ-CBW (W.D. La. June 11, 2018).

Please note that this letter and certain attachments to this letter include confidential business information ("CBI") and are marked as such. Documents marked for CBI are entitled to confidential treatment under 40 C.F.R. Part 2, Subpart B, and are not subject to disclosure under the Freedom of Information Act ("FOIA"), 5 U.S.C. § 552. We ask that LDEQ and KDHE similarly treat this as CBI under their analogous state laws.[1]

[1] Certain attachments to this letter include CBI, which Birla has designated as such with the stamp "CONFIDENTIAL BUSINESS INFORMATION NOT SUBJECT TO DISCLOSURE UNDER FOIA." Based on a review of relevant LDEQ regulations, La. Admin. Code tit. 33, pt. I, § 501(A), Birla understands that it must submit any CBI via mail or delivery to

I. North Bend

Since our last update, construction was ongoing at North Bend for installation of equipment required under the Consent Decree. Birla submitted its Title V air operating permit application for North Bend to LDEQ on May 13, 2021. *See* Attachment 8.[2]

Birla's vendor, [redacted], continues to estimate a two to four month delay for various components of the scrubber system. *See* Confidential Attachments 1 and 4. Additionally, the vendor for the reactor vent scrubber system is experiencing delays due to lack of access to manufacturing facilities in connection with poor weather conditions and COVID-19 restrictions in India. *See* Attachment 2. The lockdowns in India continue in order to slow the transmission of COVID-19. *See* Attachment 2. As a result, the scrubber system contractor has ceased all manufacturing activity through June 1, 2021. The delivery of the scrubber system was estimated for August 2021, however, this schedule will likely change. We will update you when we learn more. While Birla is still hoping for installation date in late November to early December 2021, we will endeavor to provide a more specific estimate in the near future. Since our last update, the SCR equipment and ductwork has been delivered. *See* Attachment 5.

The heat recovery steam generation ("HRSG") boiler was delayed nearly two months from the original delivery date. *See* Confidential Attachment 1. Delivery was made on March 4, 2021, and the equipment is currently being moved into place.

A [redacted] had to be sourced from a new vendor, [redacted], following [redacted]' notification that due to the death of its company principal and COVID-19 related issues, it would not be able to complete its contract and deliver the [redacted] due for delivery on April 1, 2021. *See* Confidential Attachment 1. [redacted] will deliver the [redacted] in June 2021, a nearly two-month delay over the original delivery date of April 1, 2021. *See* Confidential Attachment 1.

Lastly, Birla has experienced additional delays in delivery of steel and the wet gas scrubber. *See* Confidential Attachment 1. Birla has attempted to expedite the receipt of the scrubber by having it pre-fabricated at the manufacturing location and shipping it by barge (as the scrubber is too large to ship by truck or rail); however, Birla experienced delays in obtaining a barge for shipment near the manufacturing location to North Bend. *See* Confidential Attachments 1 and 3. The wet gas scrubber was loaded onto a barge on June 1, 2021, and is expected to arrive at North Bend on June 8, 2021. *See* Attachments 5 and 6.

The projected target completion date is still November 22, 2021; however, this date is being reevaluated due to the various vendor delays. *See* Confidential Attachment 1. Birla will be able to provide an updated projected target completion date in our next update following actual equipment deliveries. Subject to the update, the final commissioning is anticipated to take place sometime in December 2021 with the Continuous Emissions Monitoring System ("CEMS") being certified around December 31, 2021.

LDEQ and not electronically. At this time, Birla is providing the entire submittal to EPA and KDHE, and will separately submit the letter and its attachments to LDEQ.

[2] Please note that Birla is providing only the cover pages and table of contents to the Title V air operating permit application. The full application is available upon request.

II. Hickok

Construction is ongoing at Hickok for installation of equipment required under the Consent Decree. On May 27, 2021, Birla received its air emission source construction permit from KDHE. *See* Attachment 7. Moreover, as stated in the previous update, KDHE informed Birla that the 2019 authorization and Class 1 operating permit will allow the facility to operate once the air quality construction permit is issued and commissioning is complete without the need to modify the operating permit.

The critical valves for the reactor vent scrubber that had failed witness testing have since been reworked and have passed testing. The critical valves have now been installed and completed. Additionally, the prior issues at Hickok have since been resolved. Birla anticipates that Continuous Operations will occur on June 12, 2021.

Assuming there are no further delays, Birla anticipates Hickok meeting its Consent Decree obligations for this plant by June 12, 2021.

We will update you with more details as they become available. Please contact David Buente at 202-255-8684 or dbuente@sidley.com if you have any questions in the meantime.

Sincerely,

Randy Waskul
Global Director, Health, Safety & Environmental

CC: Kellie Ortega, U.S. EPA (by email)
Patrick Foley, U.S. EPA (by email)
Chris Williams, U.S. EPA (by email)
Carlos Evans, U.S. EPA Region 6 (by email)
Emad Shahin, U.S. EPA Region 6 (by email)
Lisa Gotto, U.S. EPA Region 7 (by email)
Lisa Hanlon, U.S. EPA Region 7 (by email)
Amy Algoe-Eakin, U.S. EPA Region 7 (by email)
Alex Chen, U.S. EPA Region 7 (by email)
Thomas Mariani, U.S. DOJ (by email)
Eli Quinn, U.S. DOJ (by email)
Connie Ellis, KDHE (by email)
Kate Gleeson, KDHE (by email)
Deidre Johnson, LDEQ (by FedEx)

David Buente, Sidley Austin LLP (by email)
Peter Whitfield, Sidley Austin LLP (by email)

Enclosures: Confidential Attachment 1 - 2021-06-03 - North Bend - Letter from Engineer of Record

Attachment 2 - 2021-05-12 - North Bend - Lockdown Order from the Government of Maharashtra, India affecting Scrubber System Contractor

Confidential Attachment 3 - 2021-05-10 - North Bend - Email Correspondence with Project Manager

Confidential Attachment 4 - 2021-05-19 - North Bend - Reactor Vent Scrubber Update

Attachment 5 - 2021-06-02 - North Bend - Email Correspondence with Project Manager

Attachment 6 - 2021-06-01 - North Bend - Photos of Wet Gas Scrubber Loaded Onto Barge

Attachment 7 - 2021-05-27 - Hickok - Air Emission Source Construction Permit

Attachment 8 - 2021-05-13 - North Bend - Title V Air Operating Permit Application

CONFIDENTIAL ATTACHMENT 1

2021-06-03 - North Bend -
Letter from Engineer of Record

[redacted]

Attn: Mark B. Vannice, PE, Project Director
Birla Carbon USA, Inc.
Regional Office Marietta
1800 West Oak Commons Ct
Marietta, GA 30062

[redacted] Letter: BC-014

Re: Purchase Order No. 2300002188; Notice of Force Majeure Event Update – Status as of June 2nd , 2021

Dear Mr. Vannice:

Reference is made the above Purchase Order and the Professional Services Terms and Conditions (Agreement) and Letters BC-001 dated May 13th, 2020 and BC-002 dated June 17th, 2020. Terms not otherwise defined herein shall have the meaning assigned to them in the Agreement.

In accordance with Article 12(a) of the Agreement Engineer is providing Owner an update to the Force Majeure Event notice of May 13th, 2020. The Force Majeure Event is primarily the domino effect of uncontrolled delays and disruption of the global supply chain the Owner is experiencing from its Vendors supplying material and equipment to the Facility project; and secondarily the potential delay caused by disruptions in the available services to, and mobility of, Engineers' staff. The delays and disruptions to the supply chain as we are informed by notices from the Vendors to you are caused by impacts of the COVID-19 epidemic on the manufacture of materials and equipment. These delays are outside the control and without the fault of Engineer. To the extent these delays experienced by the Vendors affects the timely delivery of our Work that depends on inputs of information and ultimately delivery to the Facility in accordance with the Schedule, we are, or likely will be, seeking extensions on the Schedule for a time reasonably necessary to overcome the effect of the delay and additional compensation as appropriate. We are to the extent possible undertaking reasonable measures to make up for time lost caused by the delay and assisting Owner, to the extent possible, mitigating Vendor impacts.

[redacted]

[redacted]

As of June 2nd , we are informed by Owner's Vendor [redacted] that they are incurring delays of anywhere from two (2) to four (4) months for various components of the AQCS due to the lack of access to manufacturing facilities in connection with the restrictions related to the COVID-19 virus. Additionally, the absorber manufacturer contracted by [redacted], [redacted], has issued [redacted] a Force Majeure claim as of March 2nd, claiming a two week delay due to the extreme cold weather event in February and Covid impacts. [redacted] and Birla are working to mitigate this latest delay in the absorber delivery through prefabrication to reduce field time. [redacted] has begun shipment of the equipment. Steel has been delayed and the absorber has been delayed due to barge availability, river lock delays, and supply chain shortages.

In addition, Owner's Vendor [redacted] delayed their hydrotest dates until January 18th and 29th, 2021, causing a delay of the delivery of the HRSG until March 3rd. This was over two months past the original delivery date.

A new priming system skid has been sourced after the original vendor backed out of their contract due to the death of the company Principal and Covid 19 impacts. The new vendor, [redacted], will deliver the skid in June of 2021, an approximate slip of more than two months over the original delivery date of April 1st.

Additionally, the entire North Bend plant was evacuated the week of August 24th, 2020 due to two named storms, Hurricane Laura and Tropical Storm Marco.

Also, the entire North Bend facility was evacuated again October 8th – 11th, 2020 for Hurricane Delta. This evacuation had initially delayed the piling contractor [redacted] and they had issued a Force Majeure notice for this event. The piling is now complete and this has been incorporated into the current schedule.

The latest extreme weather event to impact the project were the record cold in February. The site was closed Feb 15th – 17th due to local roads being closed restricting access to the site. Additionally we did close the site a few days in April due to lightning, but contractors worked Saturdays to mitigate.

These potential delays by the Vendors and the weather-related evacuations and closures of the site translates to a corresponding delay affecting the Engineer's Schedule that is also outside the control and without fault of Engineer. Engineer is taking every effort to overcome or mitigate the potential delays and will keep you informed as further information becomes available, so that we can work together cooperatively to address any problems that may arise on your Facility project.

After incorporating all the known FM delays and impacts into the project schedule, the completion date for the project was November 22nd, 2021. This date is currently being reevaluated due to the currently occurring delayed equipment deliveries from [redacted] and other vendors. By the end of the month we will be able to incorporate the actual equipment deliveries into the project schedule and provide a new completion date.

We continue to monitor the situation and will keep the Owner apprised of additional delays as they are discovered.

Please feel free to contact me at [redacted] or [redacted] if you have any questions.

Sincerely,

[redacted]

cc: Randy Waskul, Birla
[redacted]

ATTACHMENT 2

2021-05-12 - North Bend -
Lockdown Order from the Government of Maharashtra,
India affecting Scrubber System Contractor

GOVERNMENT OF MAHARASHTRA
Department of Revenue and Forest, Disaster Management,
Relief and Rehabilitation, Mantralaya, Mumbai- 400 032
No: DMU/2020/CR. 92/DisM-1, Dated: 12th May, 2021

ORDER
Break The Chain

Reference:

1.The Epidemic Diseases Act, 1897.
2. The Disaster Management Act, 2005
3. Revenue and Forest, Disaster Management, Relief and Rehabilitation Department Order No. DMU-2020/C.R.92/DMU-I, dated 2nd May 2020, 3rd May 2020, 5th May 2020, 11th May 2020, 15th May 2020, 1 7th May 2020, 19th May 2020, 21st May 2020, 31 May 2020, 4th June 2020, 25th June 2020, 29th June 2020, 6th July 2020, 7th July 2020, 29th July 2020, 4th August 2020, 19th August 2020, 31st August 2020, 30th September, 2020 and 14th October 2020, 23rd October, 2020, 29th October, 2020, 3rd November, 2020, 14th November, 2020, 23rd November, 2020, 27th November, 2020, 27th November, 2020, 21st December, 2020, 24th December, 2020, 29th December, 2020, 14th January, 2021, 19th January, 2021, 29th January, 2021, 24th February, 2021, 15th March, 2021, 27th March, 2021, 4th April, 2021,5th April, 2021, 13th April, 2021, 20th April, 2021, 21st April, 2021 and 29th April, 2021 (along with any additions and clarifications thereof)
4. Ministry of Home Affairs (MHA) Order No. 40-3/2020-PM-1 (A) Dated 1st May 2020, 11th May 2020, 17th May 2020, 20th May 2020, 30th May 2020, 29th June 2020, 29th July 2020, 29th August 2020, 30th September 2020 and 27th October 2020, 25th November, 2020, 28th December, 2020, 27th January, 2021 and 23rd February, 2021

Whereas, in exercise of the powers, conferred under the Disaster Management Act 2005, the undersigned, in his capacity as Chairperson, State Executive Committee had issued an Order dated 30th September, 2020 and 14th October, 2020 (extended by order dated 29th October, 2020, 27th November, 2020, 29th December, 2020 and 29th January, 2021 and 24th February, 202, 15th March, 2021, 17th March, 2021, 27th March, 2021, 4th April, 2021, 5th April, 2021, 13th April, 2021 and 21st April and 29th April, 2021) for containment of COVID 19 in the State for the period upto 7 AM on

15st May, 2021 and issued revised guidelines by including certain activities from time to time vide above mentioned orders.

Whereas the State Government is satisfied that the State of Maharashtra is continued to be threatened with the spread of COVID-19 virus, and therefore it is imperative to continue emergency measures to prevent and contain the spread of virus, the Government in exercise of the powers conferred under Section 2 of the Epidemic Diseases Act, 1897, read with all other enabling provisions of The Disaster Management Act, 2005, finds it is necessary to continue the enforcement of the current restrictions, along with certain additional restrictions, throughout the State beyond 7 AM on 15th May, 2021 till 7 AM on 1st June, 2021 to break the chain of transmission effectively.

Now, therefore, in exercise of the powers conferred under Section 2 of the Epidemic Diseases Act, 1897 and the powers, conferred under The Disaster Management Act, 2005, the undersigned, in his capacity as Chairperson, State Executive Committee, hereby extends all the restrictions that have been imposed vide 'Break the Chain' orders dated 13th April, 21st April and 29th April,2021 along with all additions and clarifications issued thereof as well as imposes following additional restrictions in the State till 7 AM on 1st June, 2021.

1. Any person entering the State of Maharashtra by any mode of transport will have to carry a negative RTPCR test report which will have to be issued from upto a maximum of 48 hours before the time of his entry into Maharashtra.

2. All the restrictions that have been made applicable to persons arriving from places of 'Sensitive Origins' as per the orders dated 18th April and 1st May, 2021 will be applicable to anyone arriving from any part of the country into the State.

3. In the case of cargo carriers, not more than two people (Driver + Cleaner/ helper) may be allowed to travel in the same. If these cargo carriers are originating from outside the state, these may be allowed to enter into the State with an negative RTPCR test which will have to be issued from upto a maximum of 48 hours before the time of entry into Maharashtra and which will be valid for 7 days.

4. Local DMA should keep special vigil over rural markets and APMCs and ensure Covid Appropriate Behaviour and if it finds any such place as difficult to manage and discipline to ensure non-spread of Covid epidemic, local DMA may decide on a case by case basis to shut these or may impose further restrictions.

5. Milk collection, transport and processing may be allowed without restrictions though its retail sale shall be allowed subject to restrictions imposed on shops dealing with essential items or through home delivery.

6. Personnel engaged in Airport and Port services and needed for movement of cargo related to medicines or equipments needed for Covid management will be allowed to travel in local, mono and metro services.

7. Local DMA may decide to impose further restrictions generally or to specific sectors or specific areas with intimation to SDMA and shall give at least 48 hours of public notice before making such further restrictions applicable.

BY ORDER AND IN THE NAME OF THE GOVERNOR OF MAHARASHTRA

(SITARAM KUNTE)
CHIEF SECRETARY
GOVERNMENT OF MAHARASHTRA

CONFIDENTIAL ATTACHMENT 3

2021-05-10 - North Bend -
Email Correspondence with Project Manager

Cc: Gaynor, Joe <Joe.Gaynor@adityabirla.com>; Clark, Dale <Dale.Clark@adityabirla.com>
Subject: FW: Absorber

See below

The loading delay is the result of shipping delays that are occurring throughout the United states and world.

The loading of the absorber was supposed to load on 5/17/21. The new loading date is at best 5/28, this will impact our overall schedule by at least seven calendar days

As more information is available, I will let you know.

Mark B. Vannice, PE
Project Director
North America Region, Aditya Birla Group

Birla Carbon
T: 770-792-9531 (D) | **W**: www.birlacarbon.com
C: 610-858-7633 | **E**: mark.vannice@adityabirla.com

From: [redacted]
Sent: Monday, May 10, 2021 10:42 AM
To: [redacted]
Cc: [redacted] annice, Mark <Mark.Vannice@adityabirla.com>; [redacted]
Subject: FW: Absorber

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

[redacted]

Per the below email the earliest the port can load the piece will be the 27th or 28th. I also spoke with [redacted] at [redacted] he let me know that there is some additional fabrication that needs to be done due to an issues at site. He is currently waiting on the approval for the additional work that needs to be done. We are looking into a possible second option of bringing the piece to the port and then transporting the piece to a separate roll on location. This would obviously add cost due to the extra work and equipment needed. As soon as I gather more information on the second option I will let you know. Please let me know if you have any questions.

Kind Regards,

[redacted]

[redacted]

From: [redacted]
Sent: Monday, May 10, 2021 9:04 AM
To: [redacted]
Subject: RE: Absorber

ALERT: This message originated from outside of [redacted] network. **BE CAUTIOUS** before clicking any link or attachment.

We may can try for the 27th or 28th…..

From: [redacted]
Sent: Monday, May 10, 2021 8:53 AM
To: [redacted]
Subject: RE: Absorber

Only 1

Kind Regards,

[redacted]

From: [redacted]
Sent: Monday, May 10, 2021 8:46 AM
To: [redacted]
Subject: RE: Absorber

ALERT: This message originated from outside of [redacted] network. **BE CAUTIOUS** before clicking any link or attachment.

How many pieces are there in total?

From: [redacted]
Sent: Friday, May 7, 2021 3:30 PM
To: [redacted]
Cc: [redacted] Vannice, Mark <Mark.Vannice@adityabirla.com>; [redacted]
Subject: Absorber

[redacted]

Thank you for taking my call earlier today concerning the absorber. As discussed you stated the earliest you could load our barge would be the end of the month or the beginning of next month. Can you give me a date so we can plan from there? Is there anyway this date could be moved up to the 17th?

Kind Regards,

[redacted]

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For more information, visit our corporate website at [redacted]

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For more information, visit our corporate website at [redacted]

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CONFIDENTIAL ATTACHMENT 4

2021-05-19 - North Bend -
Reactor Vent Scrubber Update

[redacted]

[redacted] SCRUBBERS PROGRESS STATUS UPDATE (19.05.2021)

1. First submission of drawings & documents dtd 14.04.2021
2. Birla comments received dtd 26.04.2021
3. Following drawings/documents are approved dtd 26.04.2021:
   a. Specifications of pneumatic Actuator Linear actuator air motor SU
   b. Quality Assurance Plan
4. Following drawings/documents are re-submitted for your comments/approval on 30.04.2021:
   a. G A drawing [redacted] Scrubber RU
   b. Specification of pneumatic Actuator Linear actuator air motor RU
   c. P&ID [redacted] Scrubber RU
   d. Operation philosophy RU
   e. GA drawing [redacted] Scrubber SU
   f. P&ID [redacted] Scrubber SU
   g. Operation philosophy SU
5. Preparation of Manufacturing drawings shall be started immediately on receipt of approvals
6. Raw Material Procurement: After drawings approval/preparation of manufacturing drawings
7. Bought out Items:
   - Spray Nozzles – Vendor quotations received & under evaluation/ordering
   - Actuator – Vendor quotation received, under finalization
   - Actuated ball valves - Vendor quotation received, under finalization
   - Other valves & misc items – Later
8. Manufacturing:
   - Later
9. Advance Payment :
   - Letter of Credit issuance is in progress

ATTACHMENT 5

2021-06-02 - North Bend -
Email Correspondence with Project Manager

Braddock, Allen S.

From: Waskul, Randy <Randy.Waskul@adityabirla.com>
Sent: Wednesday, June 2, 2021 11:22 AM
To: Braddock, Allen S.
Subject: Force Majeure Update

Allen,

Below is an update for North Bend from our Project Manager.

With Kindest Regards,

Randy

Randy Waskul
Global Director Health, Safety and Environment

Birla Carbon
T: +1 770 792 9435 (D) | +1 770 990 2507 (C) | W: www.birlacarbon.com
E: randy.waskul@adityabirla.com

Birla Carbon – USA, 1800 West Oak Commons Court, Marietta, Georgia 30062

From: Vannice, Mark <Mark.Vannice@adityabirla.com>
Sent: Wednesday, June 2, 2021 12:01 PM
To: Waskul, Randy <Randy.Waskul@adityabirla.com>
Subject: Force Majeure Update

SCR's have arrived on site

Scrubber loaded in barge 6/1/21, expected on site 6/8/22

Mark Vannice, PE

ATTACHMENT 6

2021-06-01 - North Bend -
Photos of Wet Gas Scrubber Loaded Onto Barge

ATTACHMENT 7

2021-05-27 - Hickok -
Air Emission Source Construction Permit

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367

Kansas
Department of Health and Environment

Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Lee A. Norman, M.D., Secretary

Laura Kelly, Governor

May 27, 2021

Source ID No. 0670007

Mr. Keith Steele
General Manager
Birla Carbon USA, Inc.
3500 South Road S.
Ulysses, KS 67880-8103

Re: Air Emission Source Construction Permit

Dear Mr. Steele:

The Kansas Department of Health and Environment (KDHE) reviewed the Birla Carbon USA, Inc.'s application to permanently include certain requirements and limitations of the consent decree case 6:17-CV-01661 entered on June 11, 2018. The facility is located in Ulysses, Kansas. Enclosed is the Air Emission Source Construction Permit for the consent decree requirements and limitations.

Please review the construction permit carefully since it obligates Birla Carbon USA, Inc. to certain requirements.

Please notify the Air Program Field Staff at the Southwest District Office in Dodge City at (620) 356-1075 within 30 days of termination of the consent decree so that an evaluation can be conducted.

As provided for in K.S.A. 65-3008b(e), an owner or operator may request a hearing within 15 days after affirmation, modification, or reversal of a permit decision pursuant to subsection (b) of K.S.A. 65-3008a. In the Request for Hearing, the owner or operator shall specify the provision of this act or rule and regulation allegedly violated, the facts constituting the alleged violation, and secretary's intended action. Such request must be submitted to the Director, Office of Administrative Hearings, 1020 S. Kansas Avenue, Topeka, Kansas 66612-1327. Failure to submit a timely request shall result in a waiver of the right to hearing.

Include the above source ID number in all communications with the KDHE regarding this facility. If you have any questions regarding this document, please contact me at (785) 296-1104.

Sincerely,

James D. Stewart

James D. Stewart, PE
Engineering Associate
Air Permitting Section

JS:
Enclosure
c: SWDO
CSP02909 v1.0

Bureau of Air
Permitting Section
Curtis State Office Building, Suite 310
Topeka, KS 66612-1366

Phone: 785-296-1104
Fax: 785-559-4256
James.Stewart@ks.gov

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367

Kansas
Department of Health and Environment

Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Lee A. Norman, M.D., Secretary

Laura Kelly, Governor

AIR EMISSIONS SOURCE CONSTRUCTION PERMIT

Source ID No.: 0670007

Effective Date: May 27, 2021

Source Name: Birla Carbon USA, Inc.

SIC Code: 2895, Carbon Black

NAICS Code: 325182, Carbon Black Manufacturing

Source Location: W 1/2 Section 7, Township 29S, Range 35W
Grant County, Kansas

Mailing Address: 3500 South Road S.
Ulysses, KS 67880-8103

Contact Person: Mr. Keith Steele
General Manager
Telephone: (620) 356-3151 ext. 15
E-mail: keith.steele@adityabirla.com

This permit is issued pursuant to K.S.A. 65-3008 as amended.

I. Description of Activity Subject to Air Pollution Control Regulations

The Birla Carbon USA, Inc. (Birla Carbon), formerly called Columbian Chemicals Company, carbon black plant is located at 3500 South Road S, Ulysses, Kansas 67880. Carbon black is produced at the facility by means of the oil furnace process, which entails the high-temperature pyrolysis of a hydrocarbon feedstock oil (called carbon black oil), consisting mainly of unsaturated hydrocarbons, predominantly higher than C14. Other activities at the facility include oil transfers, central vacuum system, powder packer filter, fin tube steam heaters, bag printing, wastewater pond evaporation units and space heaters. The Hickok Facility currently has two production trains (units) for the manufacture of carbon black (EU-R02 and EU-R03).

Birla Carbon entered a Consent Decree (CD) with Kansas Department of Health and Environment (KDHE) and the U.S. Environmental Protection Agency (EPA), Case 6:17-CV-01661, on June 11, 2018. Paragraph 44 of the CD requires Birla Carbon to apply to KDHE for a federally enforceable non-Title V permit that incorporates certain requirements and limitations of the CD which will continue after the CD terminates. On November 5, 2020, KDHE received the appropriate application from Birla Carbon. This permit requires Birla Carbon to meet the requirements and limitations specified in paragraph 44 of the CD.

The CD required Birla Carbon to obtain all permits or approvals from KDHE for construction necessary to meet the compliance obligations of the CD. The approriate application was submitted on February 14, 2019. On April 17, 2019, KDHE issued a Response (CSO03276 v1.0) that stated no permit or approval was needed prior to the construction.

II. Definitions

The following terms used in this permit shall be defined, solely for purposes of this permit and the reports and documents submitted pursuant thereto, as follows:

A. "7-day Rolling Average Emissions Limit" shall mean the limit on average daily emissions during the preceding seven Operating Days, specified in Section III.D.1.a and d. For purposes of clarity, to calculate the average daily emissions to compare against the limit, the first complete 7-day average compliance period is seven Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 7-day average compliance period is January 1 – January 7, provided each Day qualifies as an Operating Day), and all emissions that occur during the specified period, including emissions during all periods of Malfunction within an Operating Day, shall be included in the calculation.

B. "30-day Rolling Average Sulfur Content Weight Percent" shall mean the arithmetic average of weighted daily average sulfur contents in feedstock to all reactors as a weight percent during the preceding 30 Operating Days. It shall equal S_{30} and shall be calculated as follows:

$$S_{30} = \sum_{j=1}^{30} \frac{\left[\sum_{i=1}^{n}\left(\frac{100 * M_{S,i,j}}{M_{F,T,j}}\right)\right]}{30}$$

Where:

$\sum_{j=1}^{30}$ = Sum from Day 1 through Day 30
n = Number of reactors at the Hickok plant
$\sum_{i=1}^{n}$ = Sum for reactors 1 through n
$M_{S,i,j}$ = Mass of sulfur in the feedstock delivered to reactor i in a Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{S,i,j} = \frac{\left(S_{F,i,j} * M_{F,i,j}\right)}{100}$$

$S_{F,i,j}$ = The average sulfur content of the feed to reactor i in Day j, in weight percent, as derived using the sulfur contents for each feedstock storage tank feeding the reactor by Section III.A.3.

Where:

$$S_{F,i,j} = 100 * \sum_{k=1}^{m} \frac{\left(S_{T,k,j} * M_{T,k,j}\right)}{\left(100 * M_{F,i,j}\right)}$$

m = Number of feedstock storage tanks at the Hickok plant
$S_{T,k,j}$ = The sulfur content of the feed delivered from storage tank k to reactor i in Day j, in weight percent, as derived for each feedstock storage tank feeding the reactor by Section III.A.3

$M_{T,k,j}$ = Total mass of feedstock delivered from storage tank k to reactor i in Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,i,j}$ = Total mass of feedstock pounds delivered to reactor i from all storage tanks in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,T,j}$ = Total mass of feedstock delivered to all reactors in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{F,T,j} = \sum_{i=1}^{n} M_{F,i,j}$$

For purposes of clarity, the first complete 30-day average compliance period is 30 Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 30-day average compliance period is January 1 – January 30, provided each Day qualifies as an Operating Day).

C. "365-day Rolling Average Emissions Limit" shall mean the limit on average daily emissions during the preceding 365 Operating Days, specified in Section III.D.1. For purposes of clarity, to calculate the average daily emissions to compare against the limit, the first complete 365-day average compliance period is 365 Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 365-day average compliance period is January 1 - December 31, provided each Day qualifies as an Operating Day), and all emissions that occur during the specified period, including emissions during all periods of Malfunction within an Operating Day, shall be included in the calculation.

D. "365-day Rolling Average Sulfur Content Weight Percent" shall mean the arithmetic average of weighted daily average sulfur contents in feedstock to all reactors as a weight percent during the preceding 365 Operating Days. It shall equal S_{365} and shall be calculated as follows:

$$S_{365} = \sum_{j=1}^{365} \frac{\left[\sum_{i=1}^{n} \left(\frac{100 * M_{S,i,j}}{M_{F,T,j}}\right)\right]}{365}$$

Where:

$\sum_{j=1}^{365}$ = Sum from Day 1 through Day 365

n = Number of reactors at the Hickok plant

$\sum_{i=1}^{n}$ = Sum for reactors 1 through n

$M_{S,i,j}$ = Mass of sulfur in the feedstock delivered to reactor i in a Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{S,i,j} = \frac{\left(S_{F,i,j} * M_{F,i,j}\right)}{100}$$

$S_{F,i,j}$ = The average sulfur content of the feed to reactor i in Day j, in weight percent, as derived using the sulfur contents for each feedstock storage tank feeding the reactor by Section III.A.3

Where:

$$S_{F,i,j} = 100 * \sum_{k=1}^{m} \frac{(S_{T,k,j} * M_{T,k,j})}{(100 * M_{F,i,j})}$$

m = Number of feedstock storage tanks at the Hickok plant

$S_{T,k,j}$ = The sulfur content of the feed delivered from storage tank k to reactor i in Day j, in weight percent, as derived for each feedstock storage tank feeding the reactor by Section III.A.3

$M_{T,k,j}$ = Total mass of feedstock delivered from storage tank k to reactor i in Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,i,j}$ = Total mass of feedstock pounds delivered to reactor i from all storage tanks in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

$M_{F,T,j}$ = Total mass of feedstock delivered to all reactors in a calendar Day j, in pounds, as measured by a continuous mass flow monitoring system

Where:

$$M_{F,T,j} = \sum_{i=1}^{n} M_{F,i,j}$$

For purposes of clarity, the first complete 365-day average compliance period is 365 Operating Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the averaging period is January 1 and the first complete 365-day average compliance period is January 1 - December 31, provided each Day qualifies as an Operating Day).

E. "365-day Rolling Sum Emissions Limit" shall mean the limit on the sum of daily NO_X emissions during the preceding 365 Days, specified in Section III.C. For purposes of clarity, to calculate the sum of daily emissions to compare against the limit, the first complete 365-day compliance period is 365 Days after the Date of Continuous Operation (e.g., if the Date of Continuous Operation is January 1, the first Day in the period is January 1 and the first complete 365-day compliance period is January 1 - December 31, provided each Day qualifies as an Operating Day), and all emissions that occur during the specified period, including emissions during all periods of Malfunction within an Operating Day, shall be included in the calculation.

F. "Boiler(s)" shall mean a new boiler(s) at Hickok, installed after 6/11/2018 and shall not mean the Hickok Existing Tail Gas Boiler. However, this definition shall not be construed as precluding Birla Carbon from retrofitting the Hickok Existing Tail Gas Boiler into a Boiler to be used as part of the Low NO_X Combustion System.

G. "Business Day" shall mean any Day, except for Saturday, Sunday, and federal and State of Kansas holidays.

H. "Calendar Year" shall mean a 12-Month period.

I. "CD Emissions Reductions shall mean any emission reductions that result from any projects conducted or controls used to comply with the Consent Decree except for Surplus Emissions Reductions.

J. "CEMS" or "Continuous Emission Monitoring System" shall mean, for obligations involving NO_X under this permit, the devices defined, installed, calibrated, maintained, and operated in accordance with 40 C.F.R. § 60.13 and 40 C.F.R. Part 60 Appendices A, B and F.

K. "Clean Air Act" or "Act" shall mean the Federal Clean Air Act, 42 U.S.C.§§ 7401-7671q, and its implementing regulations.

L. "Consent Decree" or "Decree" shall mean the Birla Carbon Consent Decree filed 6/11/2018.

M. "Continuously Operate" or "Continuous Operation" shall mean that, unless otherwise specified, when a Control Technology or a PM Early Warning System is used pursuant to the terms of this permit, it shall be operated at all times of Process System Operation, consistent with good engineering and maintenance practices for such Control Technology, PM Early Warning System or the Process System, as applicable, and good air pollution control practices for minimizing emissions in accordance with 40 C.F.R. § 60.11(d).

N. "Contractor" shall mean any person or entity hired by Defendant to perform services on its behalf necessary to comply with the provisions of this permit.

O. "Control Technology" shall mean the Low NO_X Combustion System or the PM control mechanisms identified in Appendix B of this permit.

P. "Date of Continuous Operation" shall mean the date by which Hickok shall Continuously Operate a Control Technology on a Process System.

Q. "Date of Installation" shall mean the date by which Hickok shall complete installation of a Control Technology on a Process System.

R. "Day" shall mean a calendar day unless expressly stated to be a Business Day and means a 24-hour period measured from midnight to midnight.

S. "Emissions Limit" shall mean the maximum allowable emissions in units as specified in this permit, measured in accordance with this permit, met to the number of significant digits in which the limit is expressed. For example, an Emissions Limit of 0.100 is not met if the actual emission is 0.101. The fourth significant digit shall be rounded to the nearest third significant digit, or the third significant digit to the nearest second significant digit, depending upon whether the limit is expressed to three or two significant digits. For example, if an actual emission is 0.1004, that shall be reported as 0.100, and shall be in compliance with an Emissions Limit of 0.100, and if an actual Emission Limit is 0.1005, that shall be reported as 0.101, and shall not be in compliance with an Emission Limit of 0.100. The following Emissions Limits are specified in this permit: 7-day Rolling Average Emissions Limit, 365-day Rolling Average Emissions Limit, 365-day Rolling Sum Emissions Limit, Final 7-day Rolling Average Emissions Limit, Final 365-day Rolling Average Emissions Limit, Interim 7-day Rolling Average Emissions Limit, Interim 365-day Rolling Average Emissions Limit.

T. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

U. "Facility" shall mean Hickok's facility used for the manufacture of carbon black.

V. "Final 7-day Rolling Average Emissions Limit for NO_X" shall mean the applicable Final 7-day Rolling Average Emissions Limit for NO_X set forth in Section III.D.1.a.

W. "Final 365-day Rolling Average Emissions Limit for NO_X" shall mean the applicable Final 365-day Rolling Average Emissions Limit for NO_X set forth in Section III.D.1.b.

X. "Flare" shall mean a combustion device that uses an uncontrolled volume of ambient air to burn gases.

Y. "Force Majeure" for purposes of this permit, is defined as any event arising from causes beyond the control of Birla Carbon, its Contractors, or an entity controlled by Birla Carbon that causes a delay or impediment to performance in complying with any limit or requirement of this permit despite Birla Carbon's best efforts to comply with a limit or requirement.

Z. "gr/dscf" shall mean grains per dry standard cubic foot.

AA. "Heat Load Operation" shall mean the operation of any carbon black reactor, boiler or dryer combustor/burner under any of the following conditions: (1) at a reactor, when there is no oil feed but only natural gas and combustion air supplied to the reactor burner, and the reactor is not manufacturing carbon black and generating Tail Gas, including, but not limited to, during periods of Startup and Shutdown, (2) at a reactor, during the periods either prior to or at the conclusion of Process System Operation, each of which shall be as short as practicable and shall not exceed 10 minutes, when transitioning between (A) an operational mode in which oil, natural gas, and combustion air are all fed to the reactor burner and the reactor is manufacturing carbon black and generating Tail Gas, and (B) an operational mode, including, but not limited to, during periods of Startup and Shutdown, in which no oil but only natural gas and combustion air are supplied to the reactor, (3) at a boiler, when there is no oil feed to the reactors but only natural gas and combustion air (and not Tail Gas generated by a reactor during Process System Operation) are fed to the boiler including, but not limited to, during periods of Startup and Shutdown, or (4) at a dryer combustor/burner, when only natural gas and combustion air (and not Tail Gas generated by a reactor during Process System Operations) are fed to the dryer combustor/burner, including, but not limited to, during periods of Startup and Shutdown.

BB. "Hickok" shall mean Birla Carbon's carbon black facility located at 3500 South Road S Ulysses, Kansas 67880.

CC. "Hickok Existing Tail Gas Boiler" shall mean the tail gas boiler in operation at Hickok as of the Date 6/11/2018 and described in the Kansas Air Emission Source Construction Permit (C-9688) with an effective date of December 22, 2011.

DD. "Hickok Non-Assisted Flare" shall mean the Non-Assisted Flare at Hickok.

EE. "Hickok NO_X Cap" shall mean the cap on NO_X emissions at Hickok specified in Section III.E.

FF. "Hickok Process System" shall mean, collectively, all Tail Gas generating and Tail Gas combustion equipment, including, all reactors and the future tail-gas boiler(s), and, any feedstock heaters and preheaters that are fueled by Tail Gas, necessary for the manufacture of carbon black, at that Facility. As long as Hickok's feedstock heaters and preheaters are steam-fed, they are excluded from the definition of Hickok Process System.

GG. "Inspection at the Low NO_X Combustion System" shall mean the outage at the Low NOx Combustion System, to inspect and maintain the Low NO_X Combustion System. For purposes of Sections III.I and III.J of this permit, the outage shall not exceed 168 hours in duration and may not be conducted more frequently than once every 12 Months as necessary to comply with American Society for Testing and Materials and insurance requirements.

HH. "Interim 7-day Rolling Average Emissions Limit" shall mean the applicable Interim 7-day Rolling Average Emissions Limit set forth in Section III.D.

II. "Interim 365-day Rolling Average Emissions Limit" shall mean the applicable Interim 365-day Rolling Average Emissions Limit set forth in Section III.D.

JJ. "KDHE" shall mean the Kansas Department of Health and Environment.

KK. "Low NO_X Combustion System" shall mean the combination of Low-NO_X Burners, Over-Fire Air, and a Boiler(s) at Hickok, together used to control the flame temperature and mixing characteristics of fuel and oxygen, thus minimizing the formation of NO_X during combustion of fuel in the Boiler(s).

LL. "Main Bag Collector" shall mean a fabric filtration unit, equipped with bag filters or their equivalent, which, during periods of carbon black production, receives carbon black and Tail Gas from the reactor and separates the carbon black from the Tail Gas.

MM. "Malfunction" shall have the same meaning as defined at 40 C.F.R. § 60.2.

NN. "Method 9" shall mean the methodology in 40 C.F.R. Part 60, Appendix A.

OO. "Method 9 Trained Observer" shall mean a person who is trained in conducting visual assessments pursuant to Method 9.

PP. "Method 22" shall mean the methodology in 40 C.F.R. Part 60, Appendix A.

QQ. "Method for Managing PM Emissions" shall mean the method for managing PM emissions identified in the third column of Appendix B of this permit.

RR. "Month" shall mean a calendar month.

SS. "National Ambient Air Quality Standards" or "NAAQS" shall mean national ambient air quality standards that are promulgated pursuant to Section 109 of the Act, 42 U.S.C. § 7409.

TT. "NO_X" shall mean oxides of nitrogen, measured in accordance with the provisions of this permit.

UU. "Non-Assisted Flare" shall mean a Flare that is not assisted by steam or by air.

VV. "Nonattainment NSR" shall mean the nonattainment area New Source Review program within the meaning of Part D of Subchapter I of the Clean Air Act, 42 U.S.C. Sections 7501-7515, 40 C.F.R. Part 51, and any applicable State Implementation Plan.

WW. "Operating Day" shall mean any Day of Process System Operation.

XX. "Optimization and Demonstration Study" shall mean a study to optimize and demonstrate the performance of a Low NO_X Combustion System to minimize NO_X emissions from the Hickok Process System in accordance with the requirements of Paragraph 3 of Appendix E of this permit.

YY. "Over-Fire Air" shall mean an in-boiler staged combustion control at Hickok which limits the amount of combustion air introduced into the burner zone theoretically required to burn all of the fuel. Additional combustion air is then introduced after the burner zone through over-fire air ports to complete the combustion of fuel. The staged combustion of over-fire air reduces the oxygen concentrations in the lower furnace, thereby limiting the oxidation of fuel bound nitrogen and the formation of fuel NO_X.

ZZ. "Particulate Emissions Best Management Practices Control Plan" shall mean the plan for identifying sources of particulate emissions and the measures to reduce such emissions that is reflected in Appendix C of this permit.

AAA. "PM" shall mean filterable particulate matter, measured as specified in 40 C.F.R. § 60.8(f) and 40 C.F.R. Part 60, Appendix A-3, Reference Method 5/5B.

BBB. "PM Early Warning System" shall mean a probe electrification-type technology (i.e., a system in which a probe is inserted into the emissions stream and measures the momentum of the PM flowing through the duct), or a monitoring system designed to achieve an equivalent level of performance to a probe electrification-type technology that has been approved in advance of use by EPA, that provides early

warning detection of excess PM emissions from carbon black production operations by producing a signal that is transmitted to an alarm management system and converted into a numeric readout, over an averaging period of no longer than 15 minutes, as described in Appendix D to this permit.

CCC. "PM Emissions Equipment" shall mean the PM emissions equipment identified in the first column of Appendix B to this permit.

DDD. "PM Monitor Point" shall mean the point at which the PM Early Warning System is installed to measure the PM flowing through the duct of each of the Main Bag Collector and Vapor Bag Collector.

EEE. "PM Reduction Mechanism" shall mean the PM reduction mechanism identified in the middle column of Appendix B to this permit.

FFF. "ppmvd" means parts per million, volumetric dry.

GGG. "Process System Operation" shall mean the operation of any Process System or any of its constituent parts when there is oil feed to any reactor burners within such Process System, and the reactor is manufacturing carbon black. Process System Operation ends when oil feed to the reactor burners within such Process System ceases; provided however that any period of operation meeting the definition of Heat Load Operation shall not constitute Process System Operation.

HHH. "PSD" shall mean the Prevention of Significant Deterioration program within the meaning of Part C of Subchapter I of the Clean Air Act, 42 U.S.C. Sections 7470-7492, 40 C.F.R. Part 52, and any applicable State Implementation Plan.

III. "Receiving Tank Pulsaire" shall mean a filtration unit which separates carbon black from the air stream and routes the carbon black to grinders and beading systems. Carbon black is pneumatically conveyed from the Main Bag Collector to the Receiving Tank Pulsaire.

JJJ. "Dust Collector" at Hickok shall mean a filtration unit which separates carbon black from the air stream.

KKK. "Reactor Vent Scrubber" shall mean a multistage scrubber employing water as the scrubber medium.

LLL. "Shutdown" shall mean the period of ceasing of operation of the Hickok Process System, or any of its constituent parts for any purpose, and shall be limited to an operational mode in which no oil and only natural gas and combustion air are supplied to the constituent part.

MMM. "SO2" shall mean the pollutant sulfur dioxide.

NNN. "Startup" shall mean the period of setting in operation of the Hickok Process System, or any of its constituent parts, for any purpose, and shall be limited to an operational mode in which no oil and only natural gas and combustion air are supplied to the constituent part.

OOO. "Surplus Emission Reductions" shall mean reductions in an Emission Limit, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent over and above those required to comply with the requirements of the Consent Decree, to the extent that such reduced Emission Limit, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent is reflected in a federally enforceable emissions limit or requirement, which reductions may or may not take the form of credits that can be transferred to another entity, and is more stringent than the corresponding Emission Limit, 30-day Rolling Average Sulfur Content Weight Percent, and/or 365-day Rolling Average Sulfur Content Weight Percent imposed under the Consent Decree.

PPP. "Tail Gas" shall mean the gaseous by-product of the carbon black process, which is generated during periods when there is oil feed to a reactor.

QQQ. "Vapor Bag Collector" shall mean a fabric filtration unit which, during periods of carbon black production, receives water vapor, carbon black, air and combusted natural gas from the carbon black dryers and separates the carbon black from the water vapor and air. Carbon black collected by the Vapor Bag Collector is conveyed to the Pulverizer and the receiving tank to be re-beaded.

RRR. "Weight percent" shall mean weight percent (e.g., when entering in an equation, enter 2 for 2% and when the result of an equation is 2, that means 2%).

III. Air Emission Requirements and Limitations

A. 30-day Feedstock Sulfur Content Limitation

1. Birla Carbon shall process carbon black feedstock with a sulfur content of no greater than 2% measured on a 30-day Rolling Average Sulfur Content Weight Percent (as defined in Section II.B).

2. The 30-day Rolling Average Sulfur Content Weight Percent shall be calculated as specified in the definition in Section II.B.

3. When the feedstock sulfur content (weight %) of a storage tank is needed for the above calculations, it shall be determined as follows:

   Within one Business Day of each feedstock delivery, calculate the feedstock sulfur content of each storage tank, through the following equation:

$$S_T = \frac{VS\rho + V_1 S_1 \rho_1}{V\rho + V_1 \rho_1}$$

   Where:

   S_T = Tank-specific feedstock sulfur content, after the delivery of feedstock into the tank, weight %
   V = Volume of the feedstock in the tank, prior to the delivery of feedstock into the tank, gallons
   S = Sulfur content of the feedstock in the tank, prior to the delivery of feedstock into the tank, weight %
   ρ = Liquid density of the feedstock in the tank, prior to the delivery of feedstock into the tank, lb/gallon
   V_1 = Volume of feedstock delivered into the tank, gallons
   S_1 = Sulfur content of the feedstock delivered into the tank as certified by the feedstock supplier, weight %
   ρ_1 = Liquid density of the feedstock delivered into the tank as certified by the feedstock supplier, lb/gallon

4. All information necessary to demonstrate compliance with the limit in Section III.A.1 of this permit shall be recorded and retained for at least 5 years.

5. Certifications by the feedstock supplier of the sulfur content and the liquid density of the feedstock delivered shall be retained for at least 5 years.

B. 365-day Feedstock Sulfur Content Limitation

1. Birla Carbon shall process carbon black feedstock with a sulfur content of no greater than 1.75% measured on a 365-day Rolling Average Sulfur Content Weight Percent (as defined in Section II.D of this permit).

2. The 365-day Rolling Average Sulfur Content Weight Percent shall be calculated as specified in Section II.C of this permit.

3. When the feedstock sulfur content (weight %) of a storage tank is needed for the above calculations, it shall be determined as specified in Section III.A.3 of this permit.

4. All information necessary to demonstrate compliance with the limit in Section III.B.1 of this permit shall be recorded and retained for at least 5 years.

5. Certifications by the feedstock supplier of the sulfur content and the liquid density of the feedstock delivered shall be retained for at least 5 years.

C. NO_X Emission Limit Applicable to Heat Load Operation, Startup, and Shutdown (HLOSS)

1. Birla Carbon shall operate the reactors and boiler(s) during HLOSS so that the total NO_X emissions over each 365-day rolling sum does not exceed 8 tons. Heat Load Operation, Startup, Shutdown, and Boiler(s) are defined in Sections II.AA, II.NNN, II.LLL, and II.F of this permit, respectively.

2. To evaluate compliance with the applicable 365-day Rolling Sum Emissions Limit (defined in Section II.E and specified in Section III.C.1 of this permit), Birla Carbon shall perform the following calculation, for each Day, summing as described, to derive cumulative NO_X emissions in tons:

$$X = \left(\sum_{i=1}^{365}\left[\frac{\varphi * \text{ consumption}_i}{2000\ lbs}\right]\right)$$

Where:

"X" = cumulative NO_X emissions (tons) during preceding 365 Days
"φ" = 0.48 lbs NO_X/MMBtu
"i" = each Day in the preceding 365 Days
consumption$_i$ = the amount of energy input from natural gas and feedstock (in MMBtu) to the Process System per Day for each Day *i* of Heat Load Operation, Startup, or Shutdown. For any Day in which no Heat Load Operation, Startup, or Shutdown occur, consumption$_i$ shall equal zero.

3. All information necessary to demonstrate compliance with the emission limit in Section III.C.1 of this permit shall be recorded and retained for at least 5 years.

D. NO_X Process System Operation Emissions Limits and Control Technology

1. Birla Carbon shall Continuously Operate (defined in Section II.M of this permit) the Low NO_X Combustion System on the Process System. Birla Carbon shall achieve and maintain during Process System Operation the following NO_X Emission Limits:

   a. Final 7-day Rolling Average Emission Limit for NO_X determined as required by Appendix E of this permit and approved in writing by EPA. Birla Carbon has elected Option B: no less than 120 ppmvd (at 0% oxygen) and no greater than 375 ppmvd (at 0% oxygen). The exact limit does not apply until it is approved by EPA.

   b. Final 365-day Rolling Average Emission Limit for NO_X determined as required by Appendix E of this permit and approved in writing by EPA. Birla Carbon has elected Option B: no less than 80 ppmvd (at 0% oxygen) and no greater than 300 ppmvd (at 0% oxygen). The exact limit does not apply until it is approved by EPA.

c. After EPA approvals specified in Section III.D.1.a and b of this permit, Birla Carbon shall submit an application to revise this permit to include the approved final limits and remove the interim limits in Section III.D.1.d and e of this permit.

d. Interim 7-day Rolling Average Emission Limit is no greater than 375 ppmvd (at 0% oxygen).

e. Interim 365-day Rolling Average Emission Limit is no greater than 300 ppmvd (at 0% oxygen).

f. The interim limits above will be no longer be applicable after the final limits are approved.

2. Monitoring and Compliance Demonstration

a. Birla Carbon shall use a CEMS to monitor the NO_X emissions during Process System Operation of the Process System. Birla Carbon shall install, calibrate, certify, maintain, and operate the CEMS in accordance with the equipment manufacturer's specifications and reference methods specified in 40 C.F.R. § 60.13 that are applicable to CEMS, and Part 60, Appendixes A and F, and the applicable performance specification test of 40 C.F.R. Part 60, Appendix B, to demonstrate compliance with the NO_X Emissions Limits in Section III.D.1 of this permit.

3. All information necessary to demonstrate compliance with the emission limits in Section III.D of this permit shall be recorded and retained for at least 5 years.

4. Any period of downtime of the CEMS and an explanation shall be recorded and retained for at least 5 years.

E. Hickok NO_X Cap

1. Birla Carbon shall comply with a Hickok NO_X Cap of 395 tons per 12-month period by 365 Days after the Date of Continuous Operation of the Low NOx Combustion System.

2. For purposes of determining compliance with the Hickok NO_X Cap, NO_X emissions shall be determined as follows:

a. For the Low NO_X Combustion System, by measuring NO_X emissions using a CEMS in accordance with Section III.D.2.a of this permit.

b. For dryers (natural gas):

NO_X emissions = (NO_X factor for dryers (natural gas)) x (MMscf of natural gas used)

where the NO_X factor for the dryers (natural gas) = 230 lbs/MMscf

c. For natural gas boiler(s):

NO_X emissions = (NO_X factor for natural gas boiler(s)) x (MMscf of natural gas used)

where the NO_X factor for the natural gas boiler = 230 lbs/MMscf

d. For reciprocating internal combustion engines (RICE):

NO_X emissions = (NO_X factor for RICE) x (hours of operation)

where the NO_X factor for RICE = 0.031 lbs/hour for engines under 1,000 bHP

e. For the natural gas-fired oil heater:

NO_X emissions = (NO_X factor for the natural gas-fired oil heater) x (MMscf of natural gas used)

where the NO_X factor for the natural gas-fired oil heater = 230 lbs/MMscf

f. For Heat Load Operations:

NO_X emissions = (NO_X factor for Heat Load Operations) x (MMscf of natural gas used)

where the NO_X factor for Heat Load Operations = 230 lbs/MMscf

g. For Hickok Non- Assisted Flare:

NO_X emissions = (NO_X factor for Hickok Non-Assisted Flare) x (actual production in tons while Hickok Non-Assisted Flare is operating)

where the NO_X factor for the Hickok Non-Assisted Flare = 15.01 lbs NO_X per ton of production.

h. Birla Carbon may seek to revise either the NO_X factors for (Section III.E.2.b, c, d, and e of this permit), based on additional stack test data, provided there has been a prior written request by Birla Carbon, which specifies the basis for the derivation of such revised factor, and written approval by KDHE of such revised factor.

i. All information necessary to demonstrate compliance with the emission limit in Section III.E. of this permit shall be recorded and retained for at least 5 years.

F. PM Control Requirements

1. For all Hickok PM Emissions Equipment identified in Appendix B of this permit, Birla Carbon shall Continuously Operate the associated PM Reduction Mechanism in accordance with the Method for Managing PM Emissions (specified in Appendix B of this permit).

2. Once each Operating Day, Birla Carbon shall conduct a Method 22 visual assessment of the emissions from each piece of PM Emissions Equipment identified in Appendix B of this permit to determine if there are any detectable visible emissions. This Method 22 visual assessment shall be three minutes in duration for each piece of PM Emissions Equipment.

3. In the event that any visible emissions are observed from PM Emissions Equipment during the visual assessment described in Section III.F, Birla Carbon shall identify, address and resolve the source of visible emissions as expeditiously as practicable.

4. If the visible emissions event occurs after the Date of Continuous Operation of the PM Early Warning System in accordance with Section III.H of this permit, the event shall be considered resolved once the PM Early Warning System alarm is below the Action Level.

5. If the visible emissions event is not resolved within 24 hours, once visibility conditions are sufficient for a Method 9 observation, Birla Carbon shall conduct a six minute observation in accordance with Method 9 at least once every eight hours (during daylight hours), until visible emissions from the PM Emissions Equipment that triggered the event are less than 5% opacity over the six minute average.

6. All information necessary to demonstrate compliance with the requirements in Section III.F of this permit shall be recorded and retained for at least 5 years.

G. Particulate Emissions Best Management Practices Control Plan

1. Birla Carbon shall implement the Particulate Emissions Best Management Practices Control Plan reflected in Appendix C of this permit.

2. All information necessary to demonstrate compliance with the requirements in Section III.G.1 of this permit shall be recorded and retained for at least 5 years.

H. PM Early Warning System

1. Birla Carbon shall Continuously Operate a PM Early Warning System in accordance with Appendix D of this permit.

2. All information necessary to demonstrate compliance with the requirements in Section III.H.1 of this permit shall be recorded and retained for at least 5 years.

I. Prohibition On Use Of Hickok Existing Tail Gas Boiler

1. No later than the Date of Continuous Operation of the Low NO_X Combustion System, Birla Carbon shall permanently cease operation of the Hickok Existing Tail Gas Boiler, except in the limited instance of any of the following:

   a. A Malfunction at Hickok,
   b. Inspection at the Low NO_X Combustion System, or
   c. Force Majeure.

2. In response to any of the above instances, Birla Carbon shall operate the Hickok Existing Tail Gas Boiler only as necessary to comply with the carbon black MACT standard (40 C.F.R. § 63.1103(f)) and minimize operation of the Hickok Existing Tail Gas Boiler to the extent possible.

3. During operation of the Hickok Existing Tail Gas Boiler in accordance with Section III.I of this permit, the emissions from the Hickok Existing Tail Gas Boiler shall not be included in the calculation of any Emission Limits, but shall be included in the calculation of the Hickok NO_X Cap.

4. All information necessary to demonstrate compliance with the requirements in Section III.I of this permit shall be recorded and retained for at least 5 years.

J. Prohibition On Use Of Flares at Hickok

1. No later than the Date of Continuous Operation of the Low NO_X Combustion System, Birla Carbon shall permanently cease operation of the Hickok Non-Assisted Flare, except in the limited instance of any of the following:

   a. A Malfunction at Hickok,

   b. Inspection at the Low NO_X Combustion System, or
   c. Force Majeure.

2. In response to any of the instances specified in Section III.J.1 of this permit, Birla Carbon shall operate the Hickok Non-Assisted Flare only as necessary to comply with the carbon black MACT standard (40 C.F.R. § 63.1103(f)) and minimize operation of the Hickok Non-Assisted Flare to

the extent possible.

3. During operation of the Hickok Non-Assisted Flare, the emissions from the Hickok Non-Assisted Flare shall not be included in the calculation of any Emission Limits, but shall be included in the calculation of the Hickok NO_X Cap.

4. All information necessary to demonstrate compliance with the requirements in Section III.J of this permit shall be recorded and retained for at least 5 years.

K. Limited Operation of the Hickok Non-Assisted Flare, Birla Carbon shall comply with applicable law at all times the Hickok Non-Assisted Flare is in operation.

L. Whenever any violation of this permit may pose an immediate threat to the public health or welfare or the environment, Birla Carbon shall notify KDHE, orally or by electronic or facsimile transmission as soon as possible, but no later than seven days after Birla Carbon first knew, or should have known, of the violation or event.

M. All reports shall be submitted as specified by KDHE. All data shall be reported using the number of significant digits in which the pertinent standard or limit is expressed.

N. Prohibition on Netting Credits or Offsets

1. Birla Carbon shall neither generate nor use any CD Emissions Reductions: as netting reductions; as emissions offsets; to apply for, obtain, trade, or sell any emission reduction credits; or in determining whether a project would result in a significant emissions increase or significant net emissions increase in any PSD, Non-Attainment NSR, and/or minor New Source Review permit or permit proceeding. Notwithstanding the preceding sentence, Birla Carbon may use CD Emissions Reductions achieved by the prohibition on use of the Hickok Existing Tail Gas Boiler and/or the Hickok Non-Assisted Flare required in Section III.I and J of this permit for the limited purpose of permitting of the Low NOx Combustion System.

2. The limitations set forth in Section III.N.1 of this permit do not prohibit Birla Carbon from seeking to, nor prohibit KDHE from denying Birla Carbon's ability to, generate or use Surplus Emission Reductions.

3. Nothing in this Section III.N of this permit is intended to prohibit Birla Carbon from seeking to, nor to prohibit KDHE from denying, Birla Carbon's ability to use CD Emissions Reductions for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding PSD and Non-Attainment NSR rules, but including, for example, Reasonably Achievable Control Technology rules) that apply to the facility; provided, however, that Birla Carbon shall not be allowed to trade or sell any CD Emissions Reductions. Nothing in this Permit is intended to preclude the CD Emissions Reductions from being considered by a State or EPA for the purpose of attainment demonstrations submitted pursuant to Section 110 of the Act, 42 U.S.C. § 7410, or in determining impacts on NAAQS, PSD increment, or air quality related values, including visibility, in a Class I area.

IV. General Provisions

A. A construction permit or approval must be issued by KDHE prior to commencing any construction or modification of equipment or processes which results in potential-to-emit increases equal to or greater than the thresholds specified at K.A.R. 28-19-300.

B. Upon presentation of credentials and other documents as may be required by law, representatives of the

KDHE (including authorized contractors of the KDHE) shall be allowed to:

1. enter upon the premises where a regulated facility or activity is located or conducted or where records must be kept under conditions of this document;

2. have access to and copy, at reasonable times, any records that must be kept under conditions of this document;

3. inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this document; and

4. sample or monitor, at reasonable times, for the purposes of assuring compliance with this document or as otherwise authorized by the Secretary of the KDHE, any substances or parameters at any location.

C. The emission unit or stationary source which is the subject of this document shall be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the federal Clean Air Act.

D. This document is subject to periodic review and amendment as deemed necessary to fulfill the intent and purpose of the Kansas Air Quality Statutes and Regulations.

E. This document does not relieve the permittee of the obligation to obtain any approvals, permits, licenses, or documents of sanction which may be required by other federal, state, or local agencies.

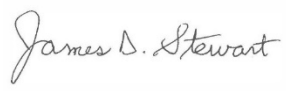
F. As applicable, EPA regulations codified in 40 CFR Part 60, 62, and 63 require affected sources to electronically submit performance test reports, notification reports, and periodic reports to EPA through the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI is accessed through the EPA's **Central Data Exchange (CDX)** (*https://cdx.epa.gov/*). If the reporting form is not available in CEDRI at the time that the report is due, the source must submit the report to the Administrator [address listed in 40 CFR 63.13]:

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

All reports, deviations, malfunctions, and other notifications required to be submitted by this permit shall be submitted through the Kansas Environmental Information Management System ("KEIMS") at:

http://www.kdheks.gov/bar/keims-BOA.html

Permit Writer



James D. Stewart, PE
Engineering Associate
Air Permitting Section

JDS:jh
c: SWDO
CSP02909 v1.0

APPENDIX A

ACRONYMS AND SYMBOLS

LIST OF ACRONYMS AND SYMBOLS

ACRONYM or SYMBOL	DESCRIPTION
2SLB	2-stroke lean burn
4SLB	4-stroke lean burn
4SRB	4-stroke rich burn
µm	micrometer (or micron, 10^{-6} meter)
acfm	actual cubic feet per minute
ANSI	American National Standards Institute
AP-42	compilation of air pollutant emission factors (U.S. EPA)
AQI	Air Quality Index
ASTM	American Society for Testing and Materials (now ASTM International)
BACT	best available control technology
BOA	KDHE Bureau of Air
Btu	British thermal unit
CAA	Clean Air Act (1970)
CAAA	Clean Air Act Amendments (1990)
CAS	Chemical Abstracts Service
CBSA	Core-Based Statistical Area
CD	compliance demonstration (form)
CDE	control device efficiency
CE	capture efficiency
CEM	continuous emission monitor(ing)
CEMS	continuous emission monitoring system
CFC	chlorofluorocarbon
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CISWI	commercial/industrial solid waste incinerator
CMS	continuous monitoring system
CO	carbon monoxide
COM	continuous opacity monitor(ing)
COMS	continuous opacity monitoring system
CPM	continuous parameter monitor(ing)
CPMS	continuous parameter monitoring system
CR	certification (form)
CSAPR	Cross-State Air Pollution Rule
CTG	Control Techniques Guideline (U.S. EPA)
DDGS	distillers dry grain solubles
dscf	dry standard cubic foot
dscm	dry standard cubic meter

ACRONYM or SYMBOL	DESCRIPTION
DSI	dry sorbent injection
E10	10% ethanol blend (10% ethanol, 90% gasoline by volume)
EF	emission factor
EG	emission guideline
EGU	electric generating unit
EI	emissions inventory
EM	emission calculations (form)
EPA	Environmental Protection Agency (or U.S. EPA)
EU	emission unit
FE	fugitive emission
FESOP	federally enforceable state operating permit
FGD	flue gas desulfurization
FGR	flue gas recirculation
FIP	federal implementation plan
g	gram
GDF	gasoline dispensing facility
GDV	gasoline delivery vessel
GEP	good engineering practice
GI	general information (form)
GOP	General Operating Permit
gph	gallons per hour
gpm	gallons per minute
gr	grain (1/7000 lb avoirdupois)
HAP	hazardous air pollutant
HC	hydrocarbon
HCFC	hydrochlorofluorocarbon
HMIWI	hospital/medical/infectious waste incinerator
HON	hazardous organic NESHAP
hp	horsepower
IA	insignificant activity
ICE	internal combustion engine
JCDHE	Johnson County Department of Health and Environment
K.A.R.	Kansas Administrative Regulation
KDHE	Kansas Department of Health and Environment
K.S.A.	Kansas Statutes Annotated
kW	kilowatt
LAER	lowest achievable emission rate
LFGE	landfill gas-to-energy
LNB	low NO_x burner
MACT	maximum achievable control technology
MATS	Mercury and Air Toxics Standards (rule)

ACRONYM or SYMBOL	DESCRIPTION
MBtu	thousand Btu
ME	monitoring equipment (form)
Mg	megagram (10^6 grams, 1 metric ton, 1 tonne)
MMBtu	million Btu
MOD	modification (form)
MON	miscellaneous organic NESHAP
MSDS	material safety data sheet
MSW	municipal solid waste
MWC	municipal waste combustor
MWI	medical waste incinerator
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NCDO	North Central District Office (KDHE)
NEDO	Northeast District Office (KDHE)
NESHAP	national emission standard(s) for hazardous air pollutants
NMOC	non-methane organic compound
NO_X, NOX	nitrogen oxides
NSPS	new source performance standard
NSR	new source review
NWDO	Northwest District Office (KDHE)
OAQPS	Office of Air Quality Planning and Standards (U.S. EPA)
OM&M	operation, maintenance, and monitoring
OSHA	Occupational Safety and Health Administration (U.S. Dept. of Labor)
P2	pollution prevention
PAL	plant-wide applicability limitation
PCB	polychlorinated biphenyl
PCD	pollution control device
PM	particulate matter
PM_{10}, PM10	PM with an aerodynamic diameter of less than or equal to 10 µm
$PM_{2.5}$, PM2.5	PM with an aerodynamic diameter of less than or equal to 2.5 µm
PMD	portable monitoring device
ppmv	parts per million, volumetric basis
ppmw	parts per million, weight basis
PSD	prevention of significant deterioration
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge or gage
PTE	potential to emit, potential-to-emit
QA/QC	quality assurance / quality control
RACM	reasonably available control measure(s)
RACT	reasonable available control technology
RATA	relative accuracy test audit

ACRONYM or SYMBOL	DESCRIPTION
RICE	reciprocating internal combustion engine
RMP	risk management plan
RTO	regenerative thermal oxidizer
RVP	Reid vapor pressure (psia at 100 °F)
SBEAP	(Kansas) Small Business Environmental Assistance Program
SCDO	South Central District Office (KDHE)
scfm	standard cubic feet per minute
SCR	selective catalytic reduction
SEDO	Southeast District Office (KDHE)
SEP	supplemental environmental project
SIC	Standard Industrial Classification (code)
SIP	state implementation plan
SLEIS	State and Local Emissions Inventory System (emissions inventory database)
SNCR	selective non-catalytic reduction
SOCMI	synthetic organic chemical manufacturing industry
SO_X, SOX	sulfur oxides (typically measured as sulfur dioxide, SO_2)
SPP	Southwest Power Pool (electric grid operator for Kansas)
SWDO	Southwest District Office (KDHE)
TCO	thermal catalytic oxidizer
TDF	tire-derived fuel
THC	total hydrocarbons
TO	thermal oxidizer
TOC	total organic carbon; total organic compounds
TOG	total organic gases
tph	tons per hour
tpy	tons per year
TR	Transport Rule
TRS	total reduced sulfur
TSP	total suspended particulate(s)
ULSD	ultra low sulfur diesel
U.S. EPA, USEPA	United States Environmental Protection Agency
USC	United States Code
VOC	volatile organic compound
VOL	volatile organic liquid
VRU	vapor recovery unit
WDEH	Wichita Department of Environmental Health
WDF	waste-derived fuel
WDGS	wet distiller's grains with solubles
WTE	waste to energy
WYCO-KCK	Unified Government of Wyandotte County and Kansas City, Kansas Health Department

APPENDIX B

PM CONTROL REQUIREMENTS

APPENDIX B: PM CONTROL REQUIREMENTS

PM Emissions Equipment	PM Reduction Mechanism	Method for Managing PM Emissions
Carbon Black Product Storage Tank, Silo or Bin	PM emissions shall be directed to either (a) a fabric filtration device that is equipped with filters specified by their supplier to achieve a PM collection efficiency of at least 99%, (b) a cartridge device that achieves a PM collection efficiency of at least 99%, or (c) a vacuum collection system that routes back to a Receiving Tank Pulsaire at Hickok.	Provisions in Section III.F (PM Control Requirements)
Carbon Black Dryer	All PM emissions shall be directed to the Vapor Bag Collector (for recovery of product).	Provisions in Section III.F (PM Control Requirements) and Section III.H (PM Early Warning System)
Reactor	All carbon black product and PM emissions generated by the reactor shall be vented to a Main Bag Collector. Direct venting to the atmosphere of any carbon black product or PM emissions generated by the reactor is prohibited at all times.	Provisions in Section III.F (PM Control Requirements), Section III.H (PM Early Warning System), and distributed control system interlocks to verify that the flow of water to the Reactor Vent Scrubber has been initiated.
Main Bag Collectors	During periods other than Heat Load Operation, reactor Startup and Shutdown and Malfunctions, the Main Bag Collector Heat Load Vents shall be closed.	Provisions in Section III.F (PM Control Requirements) and Section III.H (PM Early Warning System)
Dust Collector at Hickok; Receiving Tank Pulsaire for Hickok; and Vapor Bag Collector	All PM emissions shall be handled as part of the inherent process unit operations that employ fabric filtration to separate carbon black product, in accordance with the Compliance Assurance Monitoring Regulations under 40 CFR Part 64.	Provisions in Section III.F (PM Control Requirements) and Section III.H (PM Early Warning System)

APPENDIX C

PARTICULATE EMISSIONS BEST MANAGEMENT PRACTICES CONTROL PLAN

APPENDIX C: PARTICULATE EMISSIONS BEST MANAGEMENT PRACTICES CONTROL PLAN

The best management practices for minimizing particulate emissions described in this plan shall be followed at all times.

1. All operations and maintenance personnel shall be trained to both recognize leaks and spills of carbon black, and to report them to the proper plant personnel for response. Visual observation of the physical condition of plant process equipment that conveys, stores, loads, unloads, and packages carbon black, including at connection points between equipment and/or sections of piping, and of the physical condition of containers and bags used to package carbon black, shall be part of the daily responsibilities of the operations and maintenance personnel to help ensure that potential leaks are addressed before they occur.

2. All carbon black product shall be stored in tanks, silos, or closed bags. No carbon black product shall be stored in open piles.

3. All product and off-quality carbon black shall be shipped off-site and to the on-site landfill in closed bags, sealed cardboard boxes (for landfill), or sealed rail cars, hoppers, or bulk transport trucks, as relevant.

4. All process equipment shall be designed, operated, and maintained in a manner intended to minimize leaks and spills of carbon black and fugitive particulate emissions. In addition, Birla Carbon shall develop and implement practices to collect carbon black dust otherwise emitted from product conveyance, packaging, and storage operations, and either recycle it back into the manufacturing process or convey it to a packaging system. Where practicable, the operation of such equipment, including carbon black product conveyors, elevators, and packing units, shall be served by vacuum systems that collect carbon black.

5. All process equipment shall be located either indoors or in outdoor areas that have paved or rock/gravel ground surfaces.

6. Events that trigger the PM Early Warning System shall be handled pursuant to the protocol in Appendix D (PM Early Warning System). Leaks and spills of all carbon black that are otherwise identified shall be investigated and addressed (cleaned up and repaired) either immediately upon discovery or as quickly as practicable. When immediate repair or isolation is not feasible, the actions taken to complete the repair shall be documented. Incident reports for spills or leaks of carbon black shall be created to document cause and corrective actions.

7. Special precautions shall be taken during maintenance actions to minimize particulate emissions from the equipment on which maintenance is being performed. Prior to conducting maintenance or baghouse bag replacement on equipment that is prone to accumulation of carbon black on its interior surfaces, including, but not limited to, on the Main Bag Collectors, and Receiving Tank Pulsaire for Hickok, Vapor Bag Collectors, elevators and conveyors, and storage tanks and silos, the responsible maintenance personnel shall identify and take steps necessary to minimize the generation of particulate emissions at the equipment being maintained during the maintenance or bag replacement activity. The specific approaches taken to minimize particulate emissions during maintenance or bag replacement shall be developed on a case-specific basis based on the judgment of the maintenance personnel and shall include, as relevant, but need not be limited to, activities such as the following:

    - vacuuming carbon black from the equipment prior to beginning the maintenance,
    - vacuuming or washing down the equipment when an appropriate stage in the maintenance activity has been reached,

- if units are equipped with vents, closing vents during maintenance to prevent drafting of PM, except when Birla Carbon conducts a safety or hazard analysis and concludes in writing that closing the vent would create an unsafe or unhealthy work atmosphere, and
- sealing filter bags removed from Main Bag Collectors inside plastic bags.

8. Accessible floor and/or ground surfaces in the carbon black production areas shall be swept or washed as needed in order to minimize particulate emissions attributable to leaks or spills of carbon black that are not otherwise identified and/or addressed during the daily Visual Assessments conducted pursuant to Section III.F. All material collected through these actions shall either be incorporated into the production process/used as product for commercial distribution or properly disposed of in accordance with applicable regulatory standards.

APPENDIX D

PM EARLY WARNING SYSTEM

APPENDIX D: PM EARLY WARNING SYSTEM

1. Birla Carbon shall install a PM Early Warning System to monitor the PM emitted from each PM Monitor Point. Each PM Monitor Point shall be set to a specific alarm action level, such that an alarm is triggered when the PM at a PM Monitor Point exceeds the normal range of PM according to the manufacturer's recommendations during operation of the Process System.

2. By December 1, 2018 , Birla Carbon shall establish alarm action levels approved by EPA for each PM Monitor Point, in accordance with Paragraph 1 of this Appendix D, and by January 1, 2019, Birla Carbon shall set each PM Early Warning System to such alarm action levels:

3. Birla Carbon shall operate each PM Early Warning System at all times of Heat Load Operation and Process System Operation, except for during system breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments of the applicable PM Early Warning System. For purposes of demonstrating compliance with the requirements in Paragraph 2 of this Appendix D, the minimum degree of data availability shall be at least 95% based on a quarterly average of the operating time of the emission unit or activity being monitored.

4. In the event that an alarm is triggered for any PM Early Warning System, Birla Carbon shall investigate the cause of the alarm as expeditiously as practicable by performing each of the following tasks:

    a. Reviewing the data output for the relevant PM Early Warning System to determine whether the alarm corresponds to an actual exceedance of the alarm action level;

    b. If review of the data confirms an exceedance of the alarm action level, Birla Carbon shall conduct a visual assessment (Method 22) of the equipment monitored by the pertinent PM Early Warning System for three minutes to determine if there are any detectable visual emissions. Birla Carbon shall also conduct an appropriate equipment inspection to seek to identify the source of the alarm;

    c. If the visual assessment or other observations identify a process, equipment or other condition(s) causing an increase in PM emissions that may be responsible for triggering the relevant alarm, determining whether the relevant equipment can be isolated to reduce the excess PM emissions below alarm levels, without requiring a Process System Shutdown;

    d. If the relevant equipment can be isolated without requiring Process System Shutdown, isolating and repairing such equipment prior to returning it to service;

    e. If the relevant equipment cannot be isolated without requiring Process System Shutdown, such as if there is a leak from a dryer, a broken bag in a baghouse, or a Malfunction of any other component that cannot be isolated to the extent necessary to prevent continued excess PM emissions, shutting down the relevant equipment and only returning it to service after it has been repaired;

    f. If the triggering event has not been identified and resolved within 24 hours, having a Method 9 Trained Observer (i) conduct a visual assessment of the equipment monitored by the pertinent PM Early Warning System to determine if there are any detectable visual emissions, and, (ii) in the event that any such visible emissions are observed, conduct a six minute observation in accordance with Method 9 to determine if opacity levels are greater than 20%, and (iii) if opacity levels are greater than 20%, conduct a six minute observation in accordance with Method 9 once every 8 hours (during daylight hours) until visible emissions are less than 20% opacity;

    g. If, after investigation, the source of any elevated PM emissions cannot be identified, shutting down the subject equipment as soon as practicable to prevent further alarms and to minimize emissions and ensure the safety of employees and the community and only returning the

equipment to service after the source of the excess emissions has been identified and repaired.

5. Notwithstanding the foregoing, to the extent that recorded information for the relevant PM Early Warning System indicates that operations have returned to normal operating ranges, below levels triggering an alarm condition, Birla Carbon is not otherwise obligated to continue with implementation of the steps listed above, and may continue operation of the relevant equipment.

6. Birla Carbon shall maintain records of any event that triggers the alarm for any PM Early Warning System.

7. Birla Carbon shall perform routine maintenance of each PM Early Warning System installed pursuant to this Appendix D and Section III.H of this permit in accordance with any manufacturer recommendations and the following requirements:

    a. On at least a semiannual basis, Birla Carbon shall visually inspect and clean each sensor within the PM Early Warning System, in accordance with manufacturer recommendations, to ensure continued effective operation of the PM Early Warning System.

    b. On at least an annual basis, Birla Carbon shall comprehensively inspect the PM Early Warning System and make any necessary repairs.

8. The PM Early Warning System shall not be required to quantitatively measure PM emissions.

APPENDIX E

PROTOCOL FOR SETTING FINAL NO_X EMISSION LIMITS AT HICKOK

APPENDIX E: PROTOCOL FOR SETTING FINAL NO_X EMISSION LIMITS AT HICKOK

1. If Birla Carbon elects to comply with the applicable Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for NO_2 at Hickok set forth in Section III.D.1.a. and b., pursuant to Option B, Birla Carbon shall follow the protocol specified in this Appendix E.

2. Design Considerations. Birla Carbon's proposed process design specifications submitted pursuant to the requirements of Paragraph 27 of the Consent Decree for the Low NOx Combustion System shall evaluate, at a minimum, the following parameters:

   a. Burner Outlet Flue Gas Characteristics

      i. Outlet NO_X Concentrations
      ii. Flue Gas Volumetric Flow
      iii. Outlet Temperature Range

   b. Over-Fire Air Criteria

      i. Combustion air rate
      ii. Over-Fire Air Rate

   c. Low-NOx Burner Criteria

      i. Manufacturer and model of Low-NOx Burner
      ii. Expected NO_X concentration for burning natural gas in ppmvd at 0% oxygen (O_2)
      iii. Size of burners in MMBtu/hour and number of burners

   d. Designed to oxygen (O_2) level

   e. Safety Considerations

3. Optimization and Demonstration Study. Birla Carbon shall conduct an 18 Month Optimization and Demonstration Study. Birla Carbon shall submit a protocol consistent with the applicable design considerations for each Optimization and Demonstration Study to EPA no later than 3 Months prior to commencement of the Optimization and Demonstration Study, which shall identify, at a minimum, the operating parameters set forth in 3.a. and 3.b. below. During the first 3 Months of each Optimization and Demonstration Study, Defendant shall operate the applicable Low NOx Combustion System consistent with the protocol submitted by Birla Carbon, with the objective of establishing optimum operating levels to minimize NOx emissions for, at a minimum, the following parameters:

   a. Over-Fire Air: maximizing the effectiveness of the Over-Fire Air

   b. O_2 (minimizing O_2 should minimize NO_X and a specific O_2 level shall be established during the Optimization and Demonstration Study)

   c. Emission Rates: Outlet NO_X Concentration

   Within 30 Days of completion of the first 3 Months of each Optimization and Demonstration Study, Birla Carbon shall submit to EPA a written report that documents any conclusions that it reached in its analysis of the data from that period, and provides any relevant data supporting those conclusions.

During the last 15 Months of each Optimization and Demonstration Study, Birla Carbon shall operate the applicable Low NO_X Combustion System in a manner consistent with the conclusions reflected in the written report of the Optimization and Demonstration Study, with the objective of minimizing NO_X emissions to the extent practicable based on the design criteria.

4. Optimization and Demonstration Study Report. Birla Carbon shall submit the results of the complete Optimization and Demonstration Study to EPA in a written report no later than 60 Days after the completion of the Optimization and Demonstration Study. The report shall include the following information:

   a. Each hourly average NO_X and O_2 concentration at the point of emission to the atmosphere, as measured by a CEMS during the Optimization and Demonstration Study, and each hourly average value for each of the operating parameters listed in Paragraph 3 of this Appendix E.

   b. An evaluation of the effect, and identification of the optimum operating level, of each operating parameter listed in Paragraph 3 of this Appendix E, on the minimization of NO_X emissions from the relevant Process System.

   c. A proposed final 7-day Rolling Average Emissions Limit (in ppmvd, at 0% oxygen), and a proposed final 365-day Rolling Average Emissions Limit for NO_X (in ppmvd, at 0% oxygen), within the range set forth for Option B in Section III.D.1.a and b, to optimize operation of the Low NO_X Combustion System and minimize NO_X emissions to the extent practicable.

   Birla Carbon shall supplement the report with any other information that EPA identifies as relevant to its evaluation of the Optimization and Demonstration Study.

5. Compliance with Proposed Final Emissions Limits. Birla Carbon shall immediately upon submission of the Optimization and Demonstration Study to EPA, and, continuing thereafter, until such time as Birla Carbon is required to comply with the applicable Final 7- day Rolling Average Emissions Limit and Final 365-day Rolling Average Emissions Limit established pursuant to Paragraphs 6 and 7 of this Appendix E, Continuously Operate, a Low NOX Combustion System on each Process System, so as to achieve and maintain the applicable proposed final 7-day Rolling Average Emissions Limit and proposed final 365-day Rolling Average Emissions Limit.

6. EPA Establishment of Final Emission Limits. EPA, after consultation with KDHE, shall establish Final 7-day Rolling Average Emissions Limits and Final 365-day Rolling Average Emissions Limits for NO_X within the range set forth for Option B in Section III.D.1.a and b. EPA shall base its determination on: (i) the level of performance of the applicable Low NO_X Combustion System during the Optimization and Demonstration Study; (ii) a reasonable certainty of compliance; and (iii) any other available and relevant information.

7. Compliance with Final Emission Limits. Birla Carbon shall immediately, or, if the EPA- established Final 7-day Rolling Average Emissions Limit or Final 365-day Rolling Average Emissions Limit for NO_X for the applicable Process System is different from Birla Carbon's proposed final Emissions Limits, no later than 30 Days after receipt of written notice from EPA, and, continuing thereafter, Continuously Operate, the Low NO_X Combustion System, so as to achieve and maintain the applicable Final 7-day Rolling Average Emissions Limit and Final 365-day Rolling Average Emissions Limit.

8. Emissions Limits Option. After the Consent Decree is terminated, Birla Carbon may notify EPA and KDHE in writing that it will accept and agree to immediately, and continuing thereafter Continuously Operate, a Low NO_X Combustion System on each Process System, so as to achieve and maintain the Final 7-day Rolling Average Emissions Limit [i.e., no greater than 120 ppmvd (at 0% oxygen)] and Final 365-day Rolling Average Emissions Limit [i.e., no greater than 80 ppmvd (at 0% oxygen)] for NO_X.

ATTACHMENT 8

2021-05-13 - North Bend -
Title V Air Operating Permit Application

SLR

May 13, 2021

Mr. Elliott Vega
Assistant Secretary – Office of Environmental Services
Louisiana Department of Environmental Quality
602 North 5th Street
Baton Rouge, Louisiana 70802

Re: Title V Air Permit and PSD Minor Modification Application
Birla Carbon USA, Inc. – North Bend Plant
Centerville, St. Mary Parish, Louisiana
Agency Interest No. 4998

Dear Mr. Vega,

On behalf of our client Birla Carbon USA, Inc (Birla), SLR International Corporation (SLR) is pleased to deliver the attached Title V Air Permit and PSD Minor Modification Application for the Birla Carbon North Bend Plant (North Bend), located in Centerville, St. Mary Parish, Louisiana. North Bend is currently permitted under Part 70 (Title V) permit number 2660-00005-V10 and PSD permit number PSD-LA-580 (M-8), both of which were issued on August 14, 2019.

With this Title V Air Permit and PSD Minor Modification Application, North Bend proposes to add Selective Catalytic Reduction (SCR) units and Seawater Flue-gas Desulfurization (SWFGD) systems which reduce emissions from the flue gas. The flue gas will be routed to a new Flue Gas Stack which would replace the existing stacks. In addition, Birla Carbon requests to remove the existing Compliance Assurance Workbook and replace it with the Continuous Emissions Monitoring System (CEMS) to assure compliance with the emission limits of the permit.

North Bend also proposes to add sources that are needed for the proper operation of the SCR and SWFGD: a silo bin vent, two duct burners, and emergency water pump, to incorporate previously permitted Insignificant Activities into the permit, to modify the #3 boiler permit bases from overall hour usage to overall fuel usage and to reconcile the current C-CAP emission limits. Should you have any questions regarding this application, please contact me directly at (225) 288-5250 or tdesselles@slrconsulting.com.

Sincerely,

SLR International Corporation

Timothy Desselles, PE
Senior Principal

Birla Carbon USA, Inc
Title V Permit and PSD Minor Modification Application

Title V Permit and PSD Minor Modification Application

Prepared for: Birla Carbon USA, Inc North Bend Plant

Client Ref: 121.02591.00001

May 2021

Title V Permit and PSD Minor Modification Application

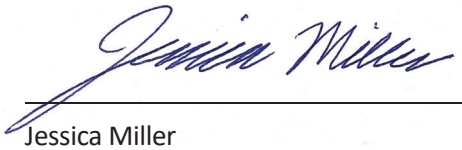
Prepared for:

Birla Carbon USA, Inc North Bend Plant

370 Columbian Chemicals Ln
Centerville, LA 70522

This document has been prepared by SLR International Corporation. The material and data in this report were prepared under the supervision and direction of the undersigned.

Timothy Desselles, PE
Senior Principal



Jessica Miller
Senior Scientist

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